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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,522	06/27/2001	Manoj Khare	2207/9864	3186

7590 12/21/2004

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EXAMINER

SHAH, NILESH R

ART UNIT

PAPER NUMBER

2127

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,522

Applicant(s)

KHARE ET AL.

Examiner

Nilesh Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/05/02, 4/29/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-36 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyouchi et al (hereinafter Toyouchi) (6,006,251) in view of Kyker et al (hereinafter Kyker) (6,026,477).
4. As per claim 1, Toyouchi teaches the invention substantially as claimed including a method of managing transaction requests in a multi-node architecture, the method comprising:
forwarding a previously received ordered group request to a destination agent(col. 52 lines 43-52);
determining whether a next received ordered group request belongs to a same ordered group as the previously received ordered group request (col. 51 lines 37-39);

if the request complete message for the previously received ordered group request has not been (col. 11 lines 60-67) received and the next received ordered group request in the same ordered group is at least one of a un-ordered request(col. 1 lines 45-48; col. 2 lines 50-60) and a forward-ordered request, then forwarding the next received ordered group request to the destination agent after the request complete message for the previously received at least one of a forward-ordered request (col. 31 lines 20-34).

5. Toyouchi does not specifically teach the use of a fork and branch mechanism.

Kyker teaches determining whether an ordering fork is encountered if the next received ordered group request belongs to the same ordered group as the previously received ordered group request (col. 3 lines 55-62);

ordering fork is encountered, determining whether a request complete message for the previously received ordered group request has been received(col. 8 lines 13-16; col. 7 lines 7-16; col. 3 lines 55-62).

6. It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Kyker and Toyouchi because Kyker's method of using a branch mechanism would improve the transaction request management of Toyouchi by reducing the use of system resources and make the entire system more efficient.
7. As per claim 2, Toyouchi teaches a method further comprising: forwarding the next received ordered group request to the destination agent if the next received ordered group request belongs to a different ordered group than the ordered group of the previously received ordered group request (col. 52 lines 43-52).

8. As per claim 3, Kyker teaches a method further comprising: forwarding the next received ordered group request to the destination agent if no ordering fork is encountered (col. 8 lines 13-16; col. 7 lines 7-16; col. 3 lines 55-62).
9. As per claim 4, Toyouchi teaches a method further comprising: forwarding the next received ordered group request in the same ordered group to the destination agent if the request complete message for the previously received ordered group request has been received (col. 35 lines 54-64; col. 52 lines 43-52).
10. As per claim 5, Toyouchi teaches a method further comprising: if the request complete message for the previously received ordered group request has not been received and the next received ordered group request in the same ordered group is at least one of a backward-ordered request (col. 35 lines 54-64) and a sequentially ordered request, then forwarding the next received ordered group request to the destination agent after the request complete message for the previously received (col. 31 lines 20-34) at least one of a un-ordered, forward-ordered, backward ordered and sequential-ordered requests issued on the different path at the ordering fork has been received (col. 52 lines 43-52).
11. As per claim 6, Toyouchi teaches a system of managing transaction requests in a multi-node architecture, comprising:
a requesting agent to issue one or more ordered group requests (col. 51 lines 46-48);

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a receiving agent to receive the one or more issued ordered group requests and to examine the one or more issued ordered group requests(col. 31 lines 26-35); and a destination agent to process the one or more issued ordered group requests (col. 51 lines 46-55);

wherein the receiving agent to examine the one or more issued ordered group requests to determine whether a request complete message for a previously received ordered group request has been received(col. 52 lines 43-52), and if the request complete message for the previously received ordered group request has not been received and a next received ordered group request is at least one of a un-ordered request and a forward-ordered request (col. 1 lines 45-48; col. 2 lines 50-60).

Kyker teaches forwarding the next received ordered group request to the destination agent if no ordering fork is encountered (col. 8 lines 13-16; col. 7 lines 7-16; col. 3 lines 55-62).

12. As per claim 7, Toyouchi teaches a system wherein receiving agent further determines whether the next received ordered group request belongs to a same ordered group as the previously received ordered group request (col. 52 lines 43-52).
13. As per claim 8, Toyouchi teaches a system wherein the receiving agent forwards the next received ordered group request to the destination agent if the next received ordered group request belongs to a different ordered group than the ordered group of the previously received ordered group request (col. 1 lines 45-48; col. 51 lines 37-39).

14. As per claim 9, Toyouchi teaches a system wherein the receiving agent forwards the next received ordered group request in the same ordered group as the previously received ordered group request to the destination agent if the request complete message for the previously received ordered group request has been received (col. 1 lines 45-48; col. 51 lines 37-39).
15. As per claim 10, Kyker teaches a system wherein the receiving agent forwards the next received ordered group request to the destination agent if no ordering fork is encountered (col. 8 lines 13-16; col. 7 lines 7-16; col. 3 lines 55-62).
16. As per claim 11, Toyouchi teaches a system wherein if the request complete message for the previously received ordered group request has not been (col. 11 lines 60-67) received and the next received ordered group request in the same ordered group is at least one of a un-ordered request(col. 1 lines 45-48; col. 2 lines 50-60) and a forward-ordered request, then forwarding the next received ordered group request to the destination agent after the request complete message for the previously received at least one of a forward-ordered request (col. 31 lines 20-34).
17. Claims 12-17 are rejected based on the same rejection as claims 6-11 above.

18. As per claim 18, Toyouchi teaches a method for managing transaction requests in a multi-mode architecture, the method comprising:
examining one or more received ordered group requests(col. 51 lines 46-48); and
determining whether a request complete message for a previously received ordered group request has been received, if the request complete message for the previously received ordered group request has not been (col. 11 lines 60-67) received and the next received ordered group request in the same ordered group is at least one of a un-ordered request(col. 1 lines 45-48; col. 2 lines 50-60) and a forward-ordered request, then forwarding the next received ordered group request to the destination agent after the request complete message for the previously received at least one of a forward-ordered request (col. 31 lines 20-34).

Kyker teaches ordered request and a sequential-ordered request issued on a different path at an ordering fork has been received (col. 8 lines 13-16; col. 7 lines 7-16; col. 3 lines 55-62).

19. As per claim 19, Toyouchi teaches a method further comprising: forwarding a previously received ordered group request to the destination agent (col. 51 lines 46-48).

20. As per claim 20, Toyouchi teaches a method further comprising:
determining whether the next received ordered group request belongs to a same ordered group as the previously received ordered group request (col. 1 lines 44-47;.col. 31 lines 20-34).

21. As per claim 21, Toyouchi teaches a method further comprising:

forwarding the next received ordered group request to the destination agent if the next received ordered group request belongs to a different ordered group than the ordered group of the previously received ordered group request (col. 51 lines 46-48; col. 31 lines 20-34).

22. As per claim 22, Toyouchi teaches a method further comprising:

forwarding the next received ordered group request in the same ordered group as the previously received ordered group request to the destination agent if the request complete message for the previously received ordered group request has been received (col. 51 lines 46-48; col. 31 lines 20-34).

23. As per claim 23, Kyker teaches a method further comprising of forwarding the next received ordered group request to the destination agent if no ordering fork is encountered (col. 8 lines 13-16; col. 7 lines 7-16; col. 3 lines 55-62).

24. Claim 24 is rejected based on the same rejected as claim 5 above.

25. As per claim 25, Toyouchi teaches a data signal embodied in a propagation medium, the data signal comprising: an ordering bit segment to specify ordering semantics for processing transaction requests, wherein the ordering bit segment to indicate whether a

previously received transaction request (col. 36 lines 9-18) included in the data signal is at least one of a unordered, forward-ordered, backward-ordered and sequentially-ordered with respect to a next received transaction request that belongs to the same particular ordered group (col. 51 lines 46-48; col. 31 lines 20-34).

26. Kyker teaches an ordered group identifier segment to indicate that the data signal belongs to a particular ordered group (col. 7 lines 52-65; col. 9 lines 1-8).

27. As per claim 26, Toyouchi teaches a data signal wherein the ordered group identifier segment further comprising: a stream identifier segment to indicate that the data signal belongs to a particular ordered stream, wherein the data signal having the same stream identifier segment are semantically ordered with respect to each other (col. 52 lines 43-52; col. 12 lines 35-43).

28. As per claim 27, Toyouchi teaches a data signal wherein the ordered group identifier segment further comprising: node identifier segment to indicate that the data signal was issued by a particular node, wherein the data signal having the same node identifier segment are semantically ordered with respect to each other (col. 16 lines 15-22; col. 52 lines 43-48).

29. As per claim 28, Toyouchi teaches a data signal wherein the next received transaction request cannot be processed before the previously received forward-ordered transaction

request that belongs to the same particular ordered group (col. 51 lines 46-48; col. 31 lines 20-34).

30. As per claim 29, Toyouchi teaches a data signal wherein the previously received backward ordered transaction request can be processed after the next-received transaction request that belongs to the same particular ordered group (col. 52 lines 43-52; col. 12 lines 35-43).

31. As per claim 30, Toyouchi teaches a data signal wherein the next received transaction request cannot be processed before the previously received sequentially-ordered transaction request and the previously received sequentially ordered transaction request cannot be processed before a next received transaction request that belongs to the same particular ordered group (col. 1 lines 45-48; col. 2 lines 50-60)

32. As per claim 31, Toyouchi teaches a data signal wherein the previously received un-ordered transaction request can be processed after a next received un-ordered transaction request that belongs to the same particular ordered group (col. 16 lines 15-22; col. 52 lines 43-48).

33. Claims 32-36 are rejected based on the same rejection as claims 1-5 above.

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Conclusion

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nilesh Shah whose telephone number is (571)272-3771.

The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nilesh Shah
Examiner
Art Unit 2127

NS
December 6, 2004

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